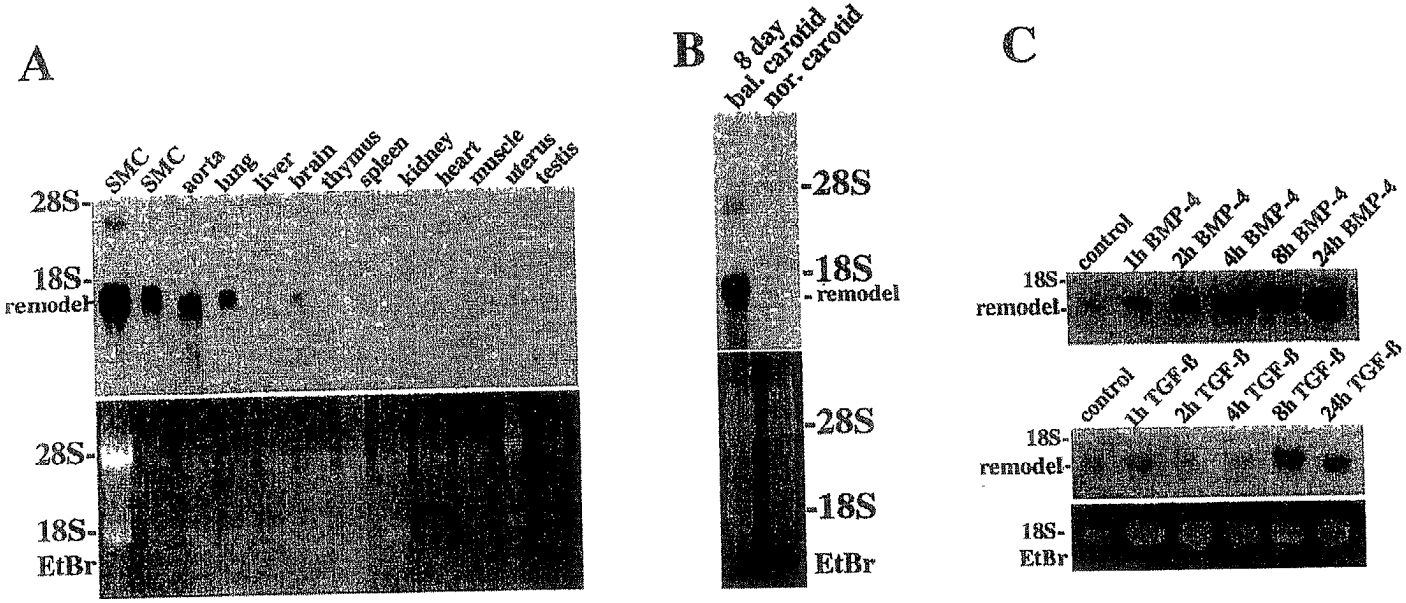

A
SMC
SMC
aorta
lung
liver
brain
thymus
spleen
kidney
heart
muscle
uterus
testis
28S-
18S-
remodel
28S-
18S-
EtBr
B
8 day
bal. carotid
nor. carotid
-28S
-18S
- remodel
-28S
-18S
EtBr
C
control
1h BMP-4
2h BMP-4
4h BMP-4
8h BMP-4
24h BMP-4
18S-
remodel-
control
1h TGF-ß
2h TGF-ß
4h TGF-ß
8h TGF-ß
24h TGF-ß
18S-
remodel-
18S-
EtBr

FIG 1

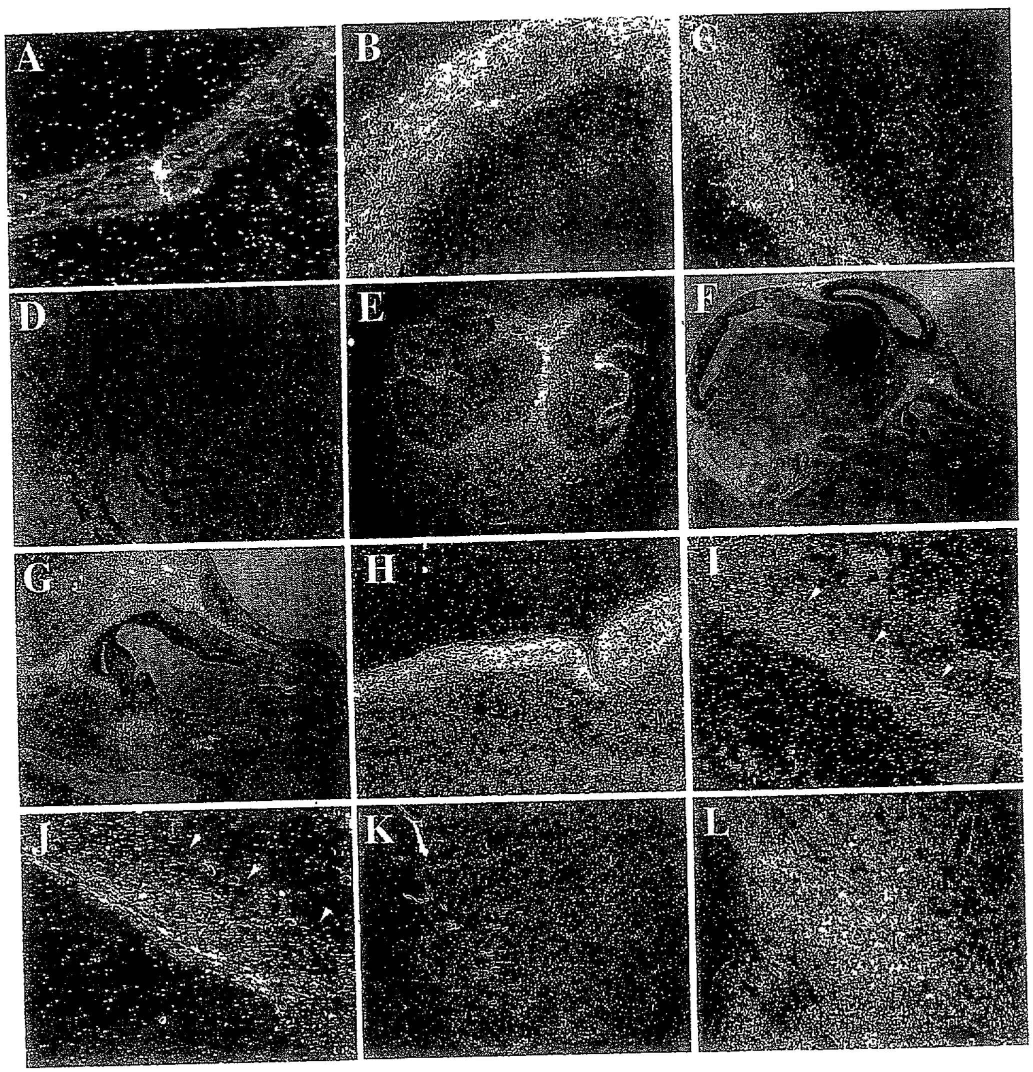


FIG. 2

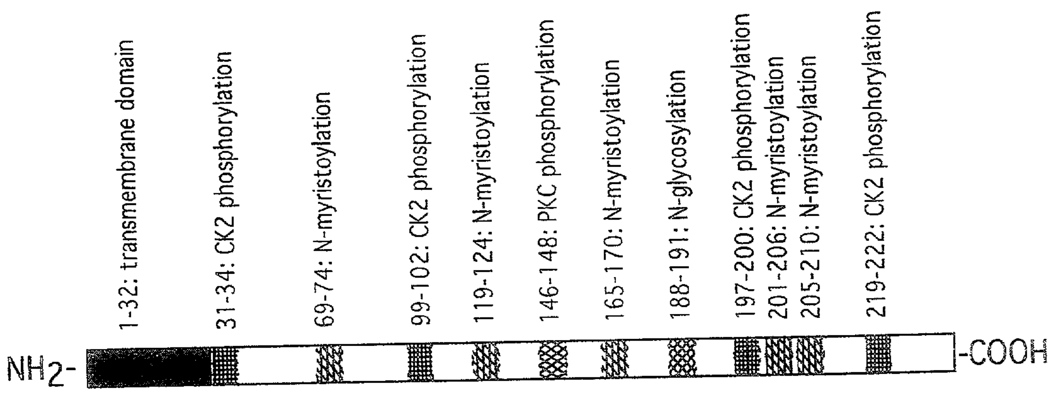

NH2-
1-32: transmembrane domain
31-34: CK2 phosphorylation
69-74: N-myristoylation
99-102: CK2 phosphorylation
119-124: N-myristoylation
146-148: PKC phosphorylation
165-170: N-myristoylation
188-191: N-glycosylation
197-200: CK2 phosphorylation
201-206: N-myristoylation
205-210: N-myristoylation
219-222: CK2 phosphorylation
-COOH

FIG. 3

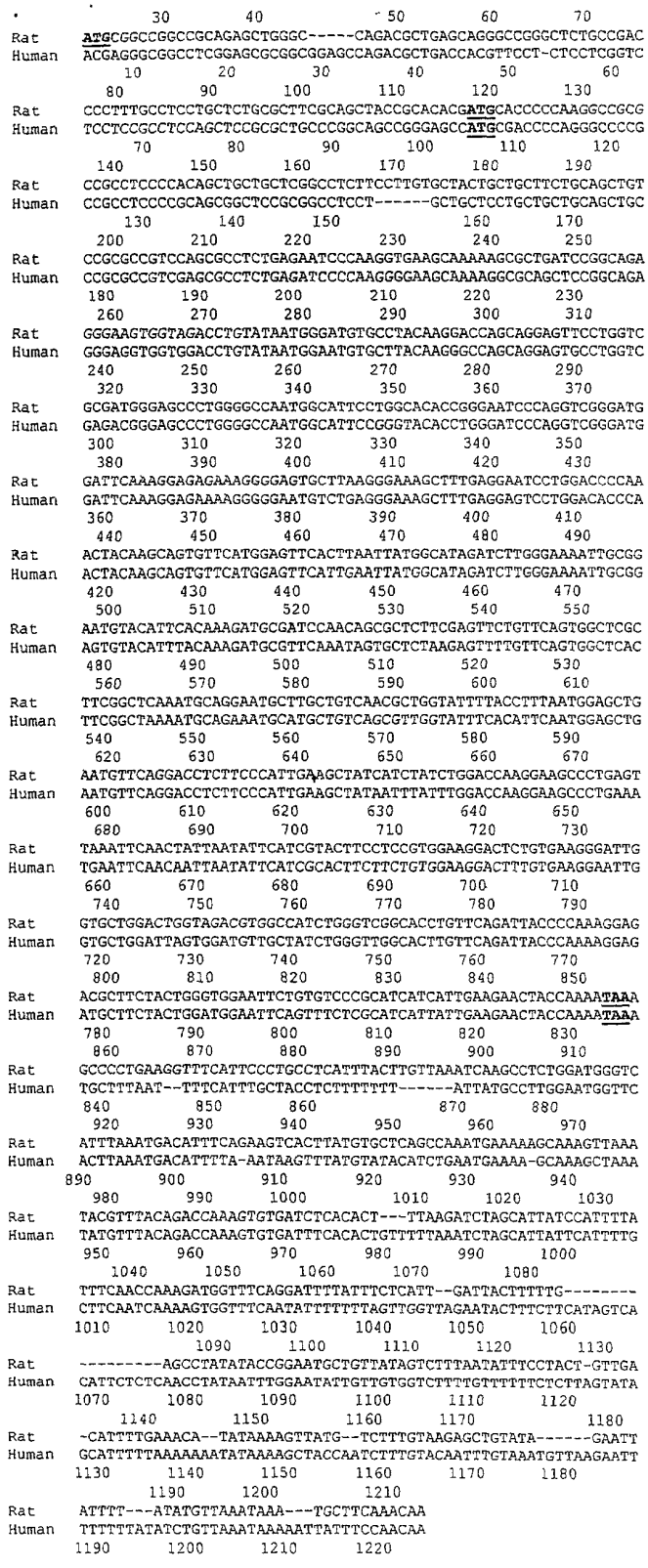

30 40 50 60 70
Rat ATGCGGCCGGCCGCAGAGCTGGGC-----CAGACGCTGAGCAGGGCCGGGCTCTGCCGAC
Human ACGAGGGCGGCCTCGGAGCGCGGCGGAGCCAGACGCTGACCACGTTCCT-CTCCTCGGTC
10 20 30 40 50 60
80 90 100 110 120 130
Rat CCCTTTGCCTCCTGCTCTGCGCTTCGCAGCTACCGCACACGATGCACCCCCAAGGCCGCG
Human TCCTCCGCCTCCAGCTCCGCGCTGCCCGGCAGCCGGGAGCCATGCGACCCCAGGGCCCCG
70 80 90 100 110 120
140 150 160 170 180 190
Rat CCGCCTCCCCACAGCTGCTGCTCGGCCTCTTCCTTGTGCTACTGCTGCTTCTGCAGCTGT
Human CCGCCTCCCCGCAGCGGCTCCGCGGCCTCCT------GCTGCTCCTGCTGCTGCAGCTGC
130 140 150 160 170
200 210 220 230 240 250
Rat CCGCGCCGTCCAGCGCCTCTGAGAATCCCAAGGTGAAGCAAAAAGCGCTGATCCGGCAGA
Human CCGCGCCGTCGAGCGCCTCTGAGATCCCCAAGGGGAAGCAAAAGGCGCAGCTCCGGCAGA
180 190 200 210 220 230
260 270 280 290 300 310
Rat GGGAAGTGGTAGACCTGTATAATGGGATGTGCCTACAAGGACCAGCAGGAGTTCCTGGTC
Human GGGAGGTGGTGGACCTGTATAATGGAATGTGCTTACAAGGGCCAGCAGGAGTGCCTGGTC
240 250 260 270 280 290
320 330 340 350 360 370
Rat GCGATGGGAGCCCTGGGGCCAATGGCATTCCTGGCACACCGGGAATCCCAGGTCGGGATG
Human GAGACGGGAGCCCTGGGGCCAATGGCATTCCGGGTACACCTGGGATCCCAGGTCGGGATG
300 310 320 330 340 350
380 390 400 410 420 430
Rat GATTCAAAGGAGAGAAAGGGGAGTGCTTAAGGGAAAGCTTTGAGGAATCCTGGACCCCAA
Human GATTCAAAGGAGAAAAGGGGGAATGTCTGAGGGAAAGCTTTGAGGAGTCCTGGACACCCA
360 370 380 390 400 410
440 450 460 470 480 490
Rat ACTACAAGCAGTGTTCATGGAGTTCACTTAATTATGGCATAGATCTTGGGAAAATTGCGG
Human ACTACAAGCAGTGTTCATGGAGTTCATTGAATTATGGCATAGATCTTGGGAAAATTGCGG
420 430 440 450 460 470
500 510 520 530 540 550
Rat AATGTACATTCACAAAGATGCGATCCAACAGCGCTCTTCGAGTTCTGTTCAGTGGCTCGC
Human AGTGTACATTTACAAAGATGCGTTCAAATAGTGCTCTAAGAGTTTTGTTCAGTGGCTCAC
480 490 500 510 520 530
560 570 580 590 600 610
Rat TTCGGCTCAAATGCAGGAATGCTTGCTGTCAACGCTGGTATTTTACCTTTAATGGAGCTG
Human TTCGGCTAAAATGCAGAAATGCATGCTGTCAGCGTTGGTATTTCACATTCAATGGAGCTG
540 550 560 570 580 590
620 630 640 650 660 670
Rat AATGTTCAGGACCTCTTCCCATTGAAGCTATCATCTATCTGGACCAAGGAAGCCCTGAGT
Human AATGTTCAGGACCTCTTCCCATTGAAGCTATAATTTATTTGGACCAAGGAAGCCCTGAAA
600 610 620 630 640 650
680 690 700 710 720 730
Rat TAAATTCAACTATTAATATTCATCGTACTTCCTCCGTGGAAGGACTCTGTGAAGGGATTG
Human TGAATTCAACAATTAATATTCATCGCACTTCTTCTGTGGAAGGACTTTGTGAAGGAATTG
660 670 680 690 700 710
740 750 760 770 780 790
Rat GTGCTGGACTGGTAGACGTGGCCATCTGGGTCGGCACCTGTTCAGATTACCCCAAAGGAG
Human GTGCTGGATTAGTGGATGTTGCTATCTGGGTTGGCACTTGTTCAGATTACCCAAAAGGAG
720 730 740 750 760 770
800 810 820 830 840 850
Rat ACGCTTCTACTGGGTGGAATTCTGTGTCCCGCATCATCATTGAAGAACTACCAAAATAAA
Human ATGCTTCTACTGGATGGAATTCAGTTTCTCGCATCATTATTGAAGAACTACCAAAATAAA
780 790 800 810 820 830
860 870 880 890 900 910
Rat GCCCCTGAAGGTTTCATTCCCTGCCTCATTTACTTGTTAAATCAAGCCTCTGGATGGGTC
Human TGCTTTAAT--TTTCATTTGCTACCTCTTTTTTT------ATTATGCCTTGGAATGGTTC
840 850 860 870 880
920 930 940 950 960 970
Rat ATTTAAATGACATTTCAGAAGTCACTTATGTGCTCAGCCAAATGAAAAAGCAAAGTTAAA
Human ACTTAAATGACATTTTA-AATAAGTTTATGTATACATCTGAATGAAAA-GCAAAGCTAAA
890 900 910 920 930 940
980 990 1000 1010 1020 1030
Rat TACGTTTACAGACCAAAGTGTGATCTCACACT---TTAAGATCTAGCATTATCCATTTTA
Human TATGTTTACAGACCAAAGTGTGATTTCACACTGTTTTTAAATCTAGCATTATTCATTTTG
950 960 970 980 990 1000
1040 1050 1060 1070 1080
Rat TTTCAACCAAAGATGGTTTCAGGATTTTATTTCTCATT--GATTACTTTTTG--------
Human CTTCAATCAAAAGTGGTTTCAATATTTTTTTAGTTGGTTAGAATACTTTCTTCATAGTCA
1010 1020 1030 1040 1050 1060
1090 1100 1110 1120 1130
Rat ---------AGCCTATATACCGGAATGCTGTTATAGTCTTTAATATTTCCTACT-GTTGA
Human CATTCTCTCAACCTATAATTTGGAATATTGTTGTGGTCTTTTGTTTTTTCTCTTAGTATA
1070 1080 1090 1100 1110 1120
1140 1150 1160 1170 1180
Rat -CATTTTGAAACA--TATAAAAGTTATG--TCTTTGTAAGAGCTGTATA------GAATT
Human GCATTTTTAAAAAAATATAAAAGCTACCAATCTTTGTACAATTTGTAAATGTTAAGAATT
1130 1140 1150 1160 1170 1180
1190 1200 1210
Rat ATTTT---ATATGTTAAATAAA---TGCTTCAAACAA
Human TTTTTTATATCTGTTAAATAAAAATTATTTCCAACAA
1190 1200 1210 1220

Figure 4A

```
Rat:    1    MHPQGRAASPQLLLGLFLVLLLLLQLSAPSSASENPKVKQKALIRQREVVDLYNGMCLQG   60
             M+PQG+AASPQ+L+GL+++LLLLLQL+APSSASE+PK+KQKA++RQREVVDLYNGMCLQG
Human:  1    MRPQGPAASPQRLRGL--LLLLLLQLPAPSSASEIPKGKQKAQLRQREVVDLYNGMCLQG   58

Rat:    61   PAGVPGRDGSPGANGIPGTPGIPGRDGFKGEKGECLRESFEESWTPNYKQCSWSSLNYGI   120
             PAGVPGRDGSPGANGIPGTPGIPGRDGFKGEKGECLRESFEESWTPNYKQCSWSSLNYGI
Human:  59   PAGVPGRDGSPGANGIPGTPGIPGRDGFKGEKGECLRESFEESWTPNYKQCSWSSLNYGI   118

Rat:    121  DLGKIAECTFTKMRSNSALRVLFSGSLRLKCRNACCQRWYFTFNGAECSGPLPIEAIIYL   180
             DLGKIAECTFTKMRSNSALRVLFSGSLRLKCRNACCQRWYFTFNGAECSGPLPIEAIIYL
Human:  119  DLGKIAECTFTKMRSNSALRVLFSGSLRLKCRNACCQRWYFTFNGAECSGPLPIEAIIYL   178

Rat:    181  DQGSPELNSTINIHRTSSVEGLCEGIGAGLVDVAIWVGTCSDYPKGDASTGWNSVSRIII   240
             DQGSPE+NSTINIHRTSSVEGLCEGIGAGLVDVAIWVGTCSDYPKGDASTGWNSVSRIII
Human:  179  DQGSPEMNSTINIHRTSSVEGLCEGIGAGLVDVAIWVGTCSDYPKGDASTGWNSVSRIII   238

Rat:    241  EELPK   245
             EELPK
Human:  239  EELPK   243
```

Figure 4B

MRPAAELGQTLSRAGLCRPLCLLLCASQLPHTMHPQGRAASPQLLLGLFLVLLLLLQL
SAPSSASENPKVKQKALIRQREVVDLYNGMCLQGPAGVPGRDGSPGANGIPGTPGIPG
RDGFKGEKGECLRESFEESWTPNYKQCSWSSLNYGIDLGKIAECTFTKMRSNSALRVL
FSGSLRLKCRNACCQRWYFTFNGAECSGPLPIEAIIYLDQGSPELNSTINIHRTSSVE
GLCEGIGAGLVDVAIWVGTCSDYPKGDASTGWNSVSRIIIEELPK

FIG. 4C

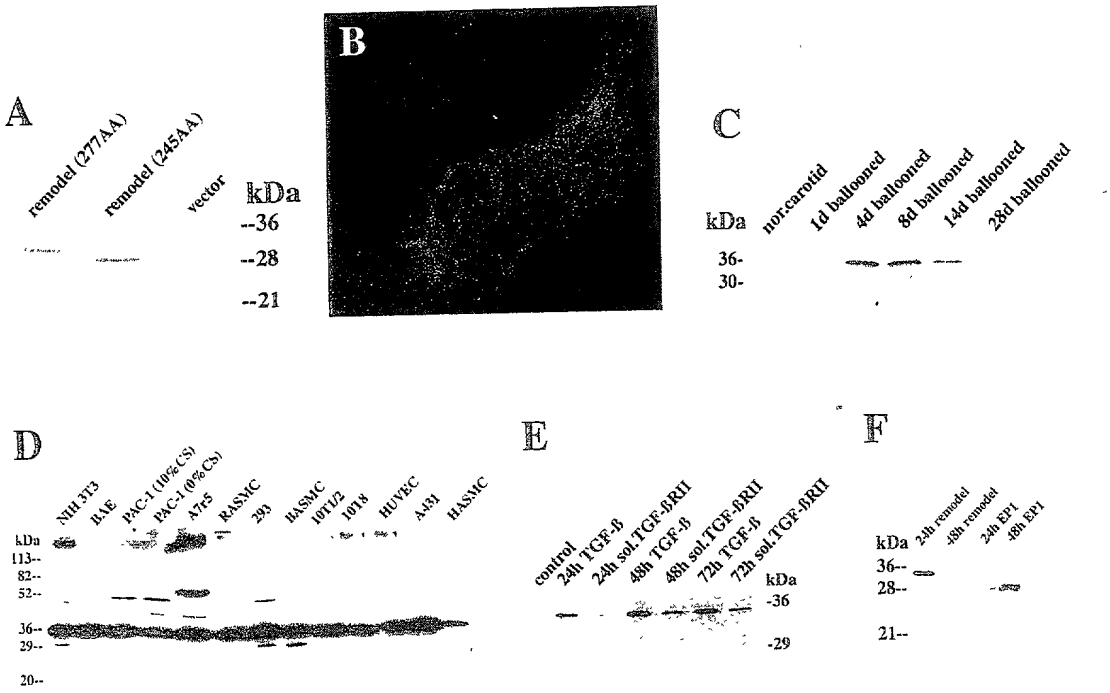

A
remodel (277AA)
remodel (245AA)
vector
kDa
--36
--28
--21
B
C
kDa
nor.carotid
1d ballooned
4d ballooned
8d ballooned
14d ballooned
28d ballooned
36-
30-
D
NIH 3T3
BAE
PAC-1 (10%CS)
PAC-1 (0%CS)
A7r5
RASMC
293
HASMC
10T1/2
1018
HUVEC
A431
HASMC
kDa
113--
82--
52--
36--
29--
20--
E
control
24h TGF-ß
24h sol.TGF-ßRII
48h TGF-ß
48h sol.TGF-ßRII
72h TGF-ß
72h sol.TGF-ßRII
kDa
-36
-29
F
kDa
24h remodel
48h remodel
24h EP1
48h EP1
36--
28--
21--

Figure 5

Figure 6

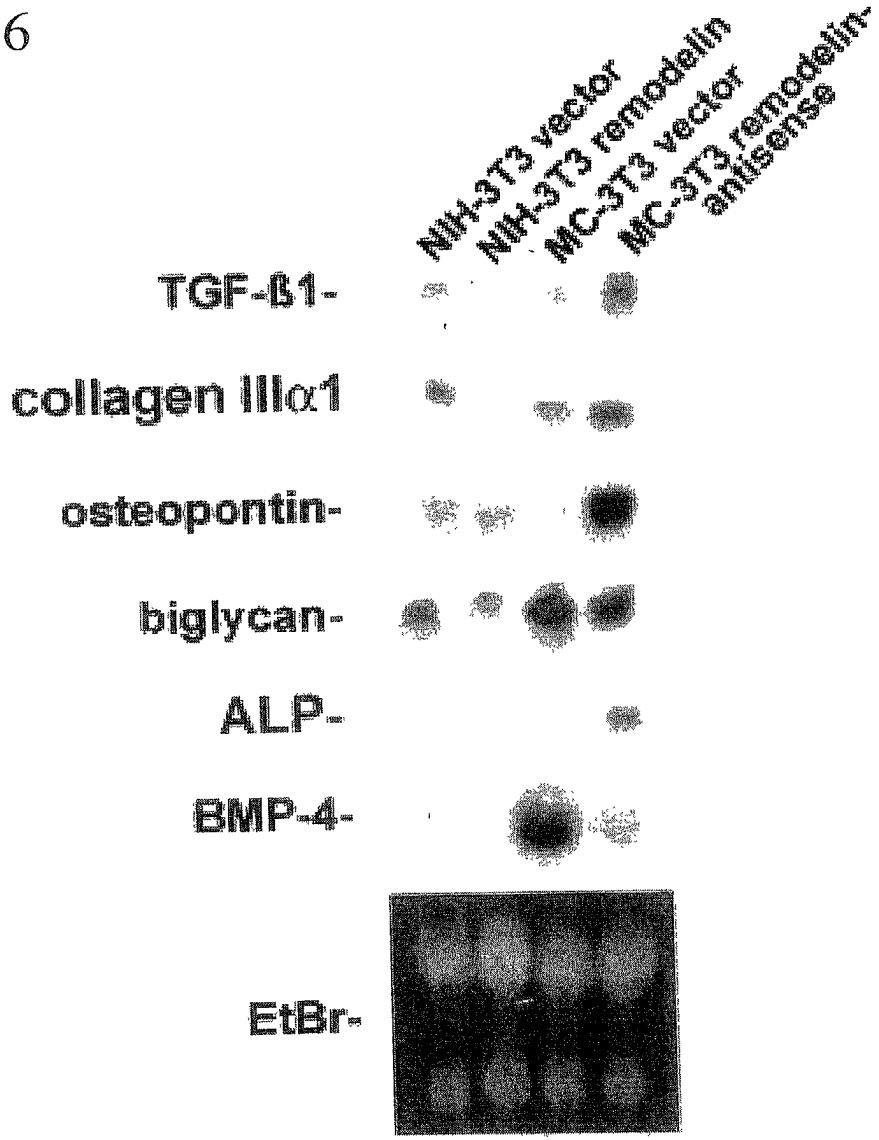


Figure 7

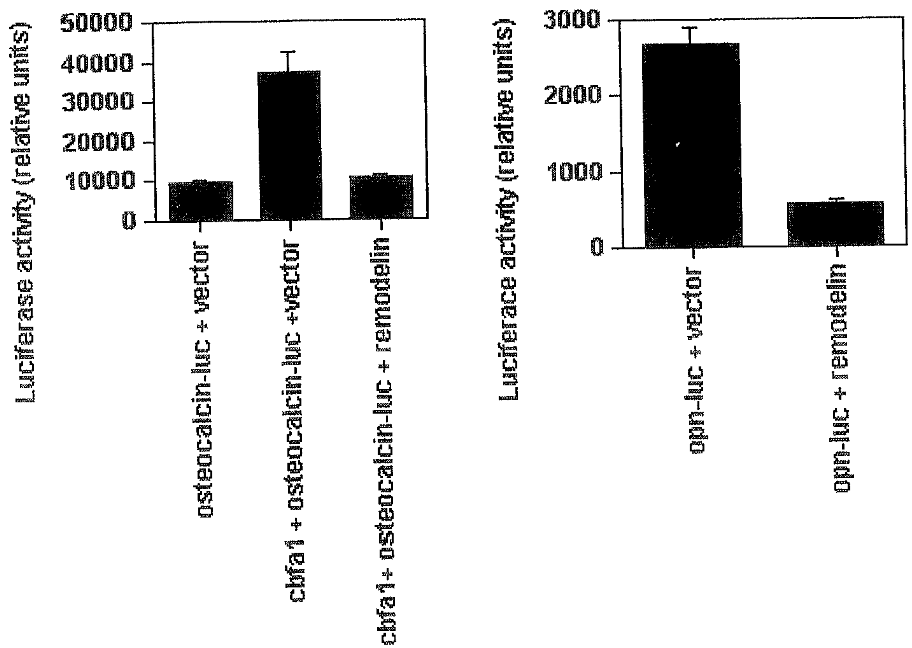
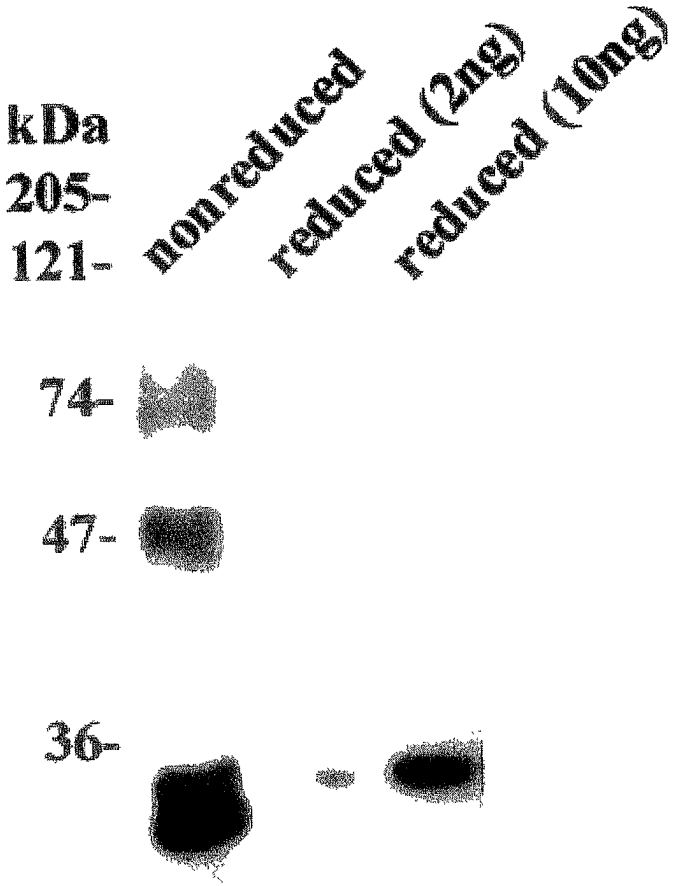


Figure 8



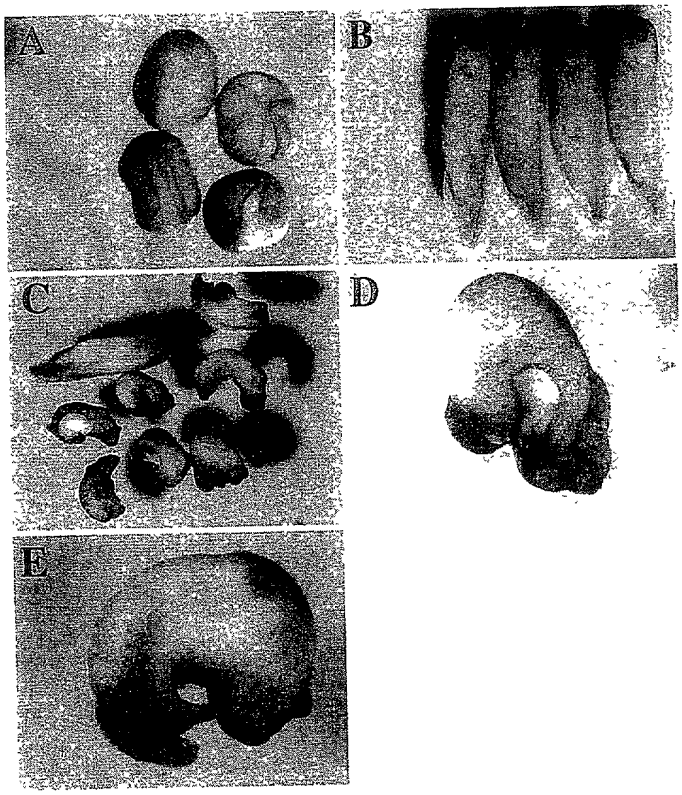
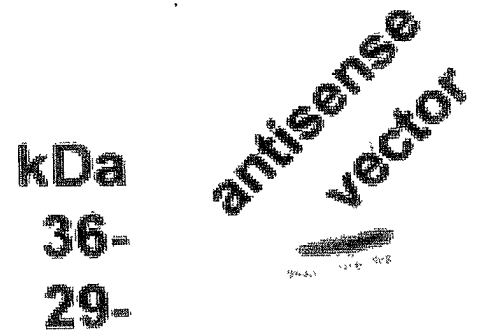


Figure 9

ATG GCCCCCAAGG CCGCGCCGCC TCCCCACAGC TGCTGCTCGG CCTCTTCCTT GTGCTACTGC
TGCTTCTGCA GCTGTCCGCG CCGTCCAGCG CCTCTGAGAA TCCCAAGGTG AAGCAAAAAG
CGCTGATCCG GCAGAGGGAA GTGGTAGACC TGTATAATGG GATGTGCCTA CAAGGACCAG
CAGGAGTTCC TGGTCGCGAT GGGAGCCCTG GGGCCAATGG CATTCCTGGC ACACCGGGAA
TCCCAGGTCG GGATGGATTC AAAGGAGAGA AAGGGGAGTG CTTAAGGGAA AGCTTTGAGG
AATCCTGGAC CCCAAACTAC AAGCAGTGTT CATGGAGTTC ACTTAATTAT GGCATAGATC
TTGGGAAAAT TGCGGAATGT ACATTCACAA AGATGCGATC CAACAGCGCT CTTCGAGTTC
TGTTCAGTGG CTCGCTTCGG CTCAAATGCA GGAATGCTTG CTGTCAACGC TGGTATTTTA
CCTTTAATGG AGCTGAATGT TCAGGACCTC TTCCCATTGA AGCTATCATC TATCTGGACC
AAGGAAGCCC TGAGTTAAAT TCAACTATTA ATATTCATCG TACTTCCTCC GTGGAAGGAC
TCTGTGAAGG GATTGGTGCT GGACTGGTAG ACGTGGCCAT CTGGGTCGGC ACCTGTTCAG
ATTACCCCAA AGGAGACGCT TCTACTGGGT GGAATTCTGT GTCCCGCATC ATCATTGAAG
AACTACCAAA A

Figure 10

Figure 11



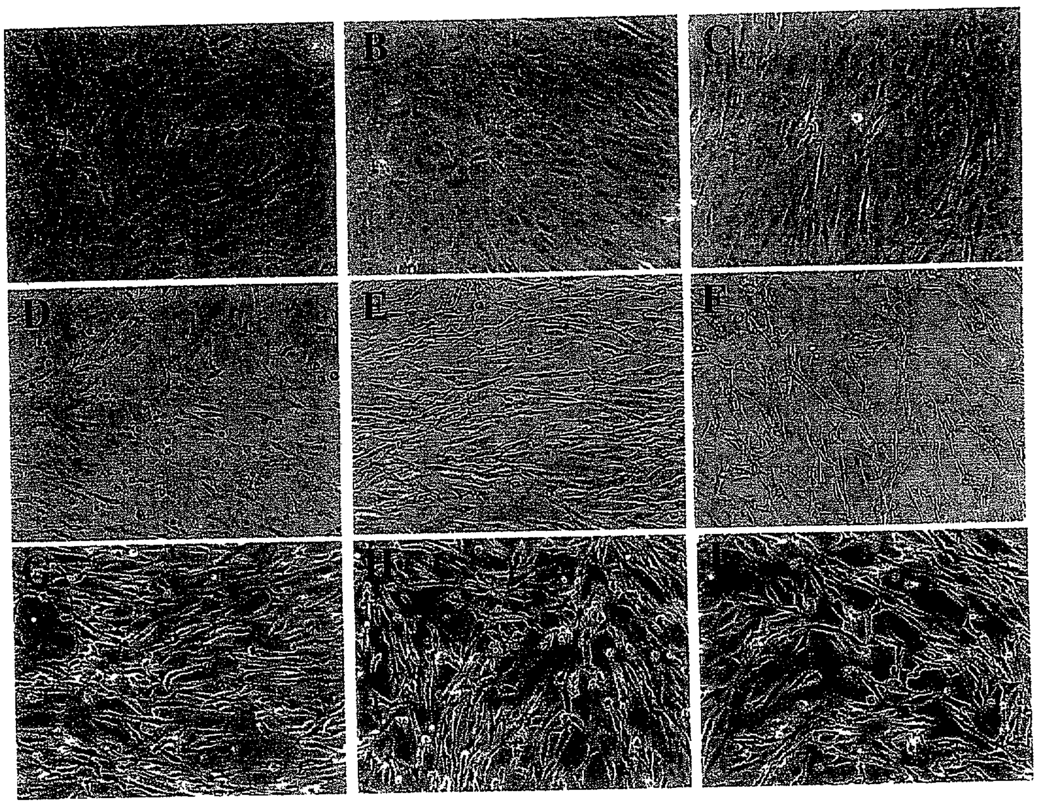


Figure 12

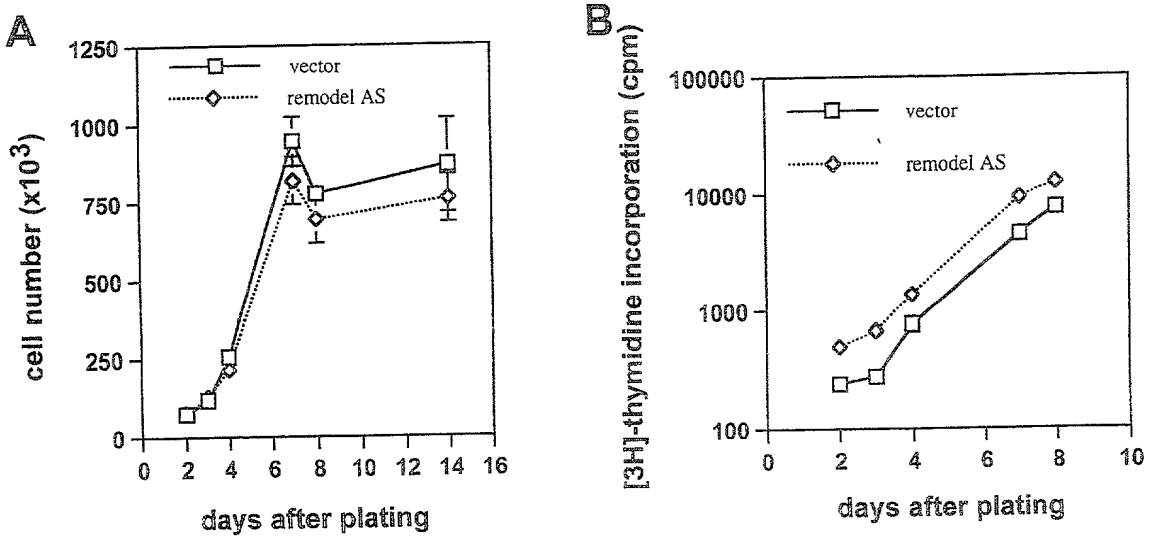

A
1250
1000
750
500
250
0
cell number (x10^3)
vector
remodel AS
0 2 4 6 8 10 12 14 16
days after plating
B
100000
10000
1000
100
[3H]-thymidine incorporation (cpm)
vector
remodel AS
0 2 4 6 8 10
days after plating

Figure 13

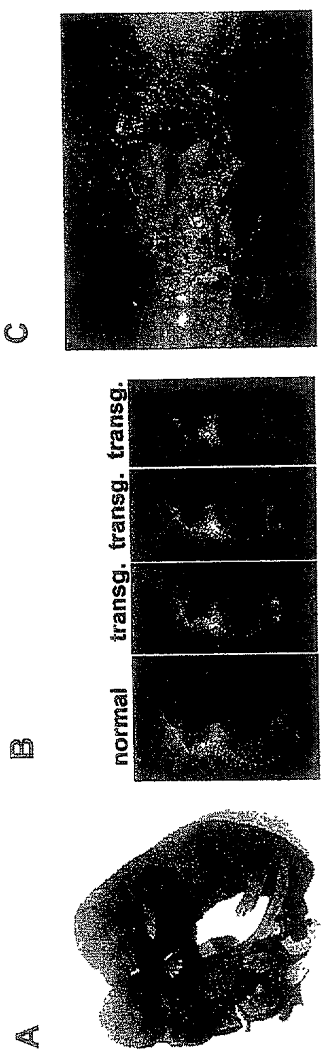
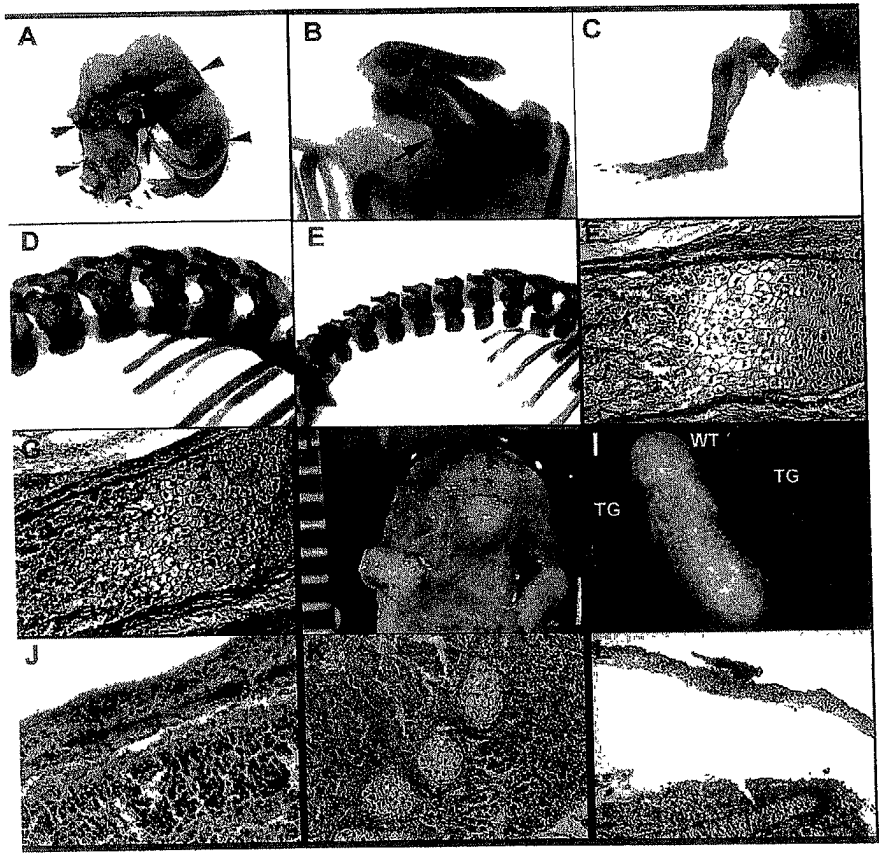


Figure 14

Figure 15



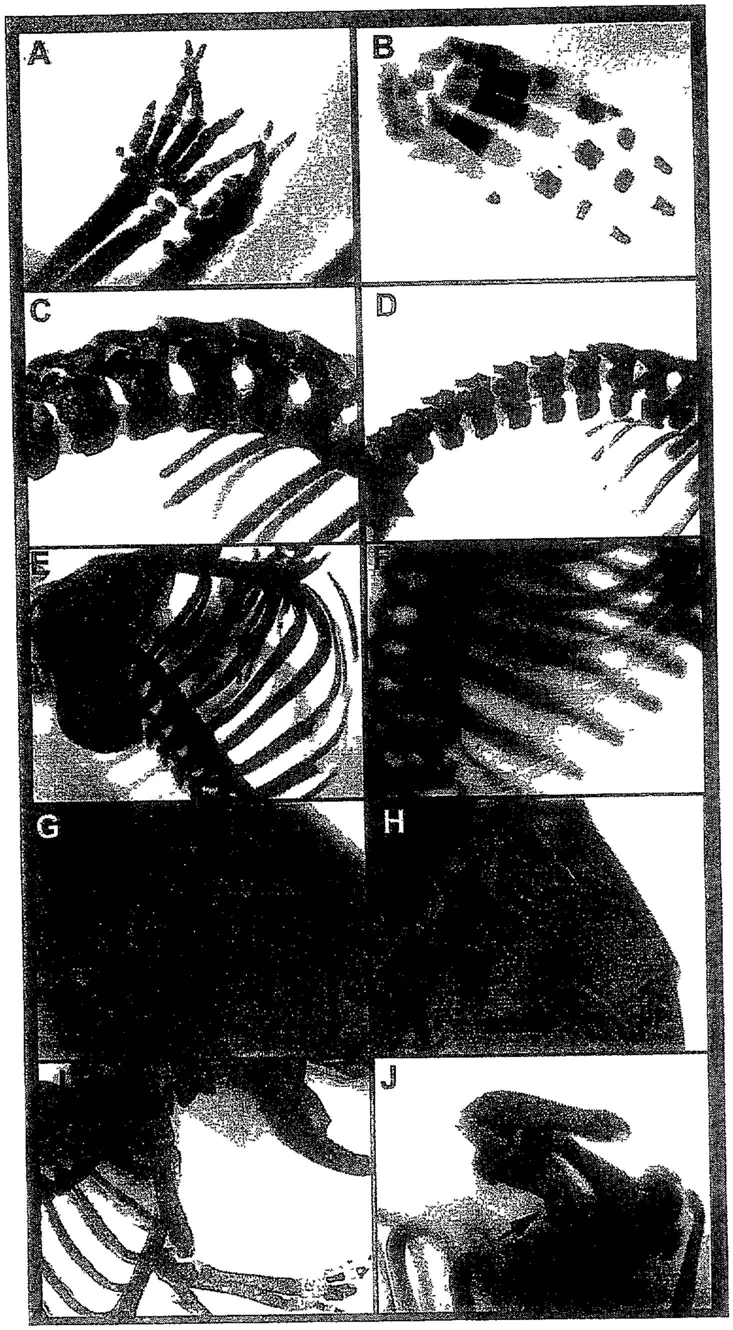


Figure 16

Figure 17

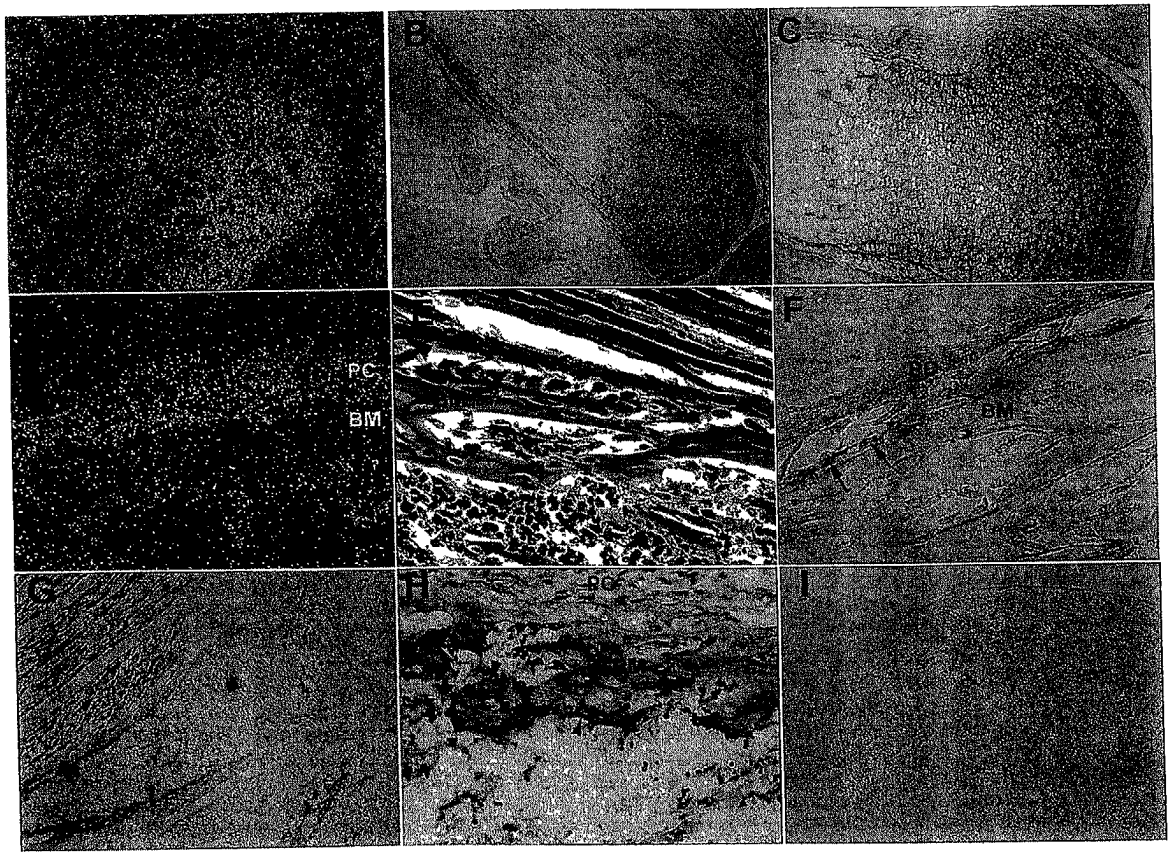
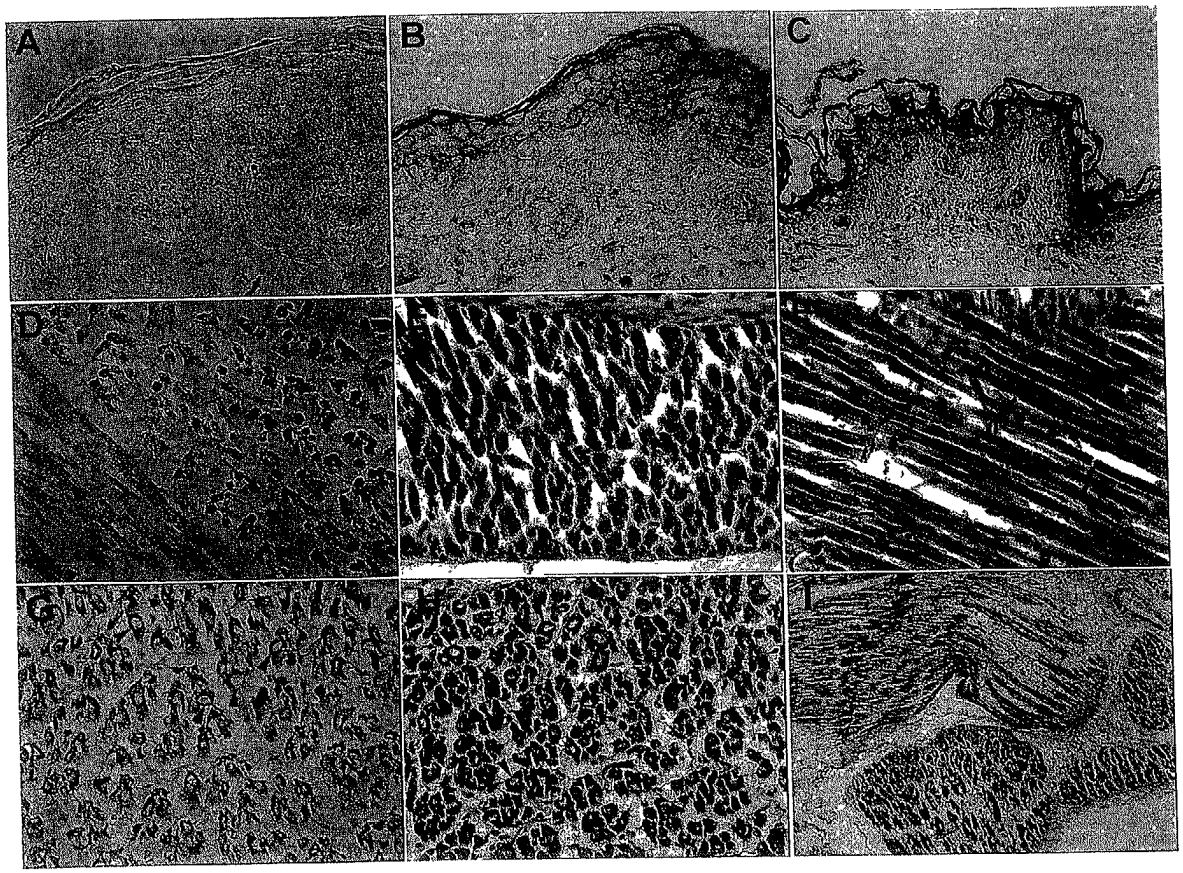


Figure 18



CCACCCAGUAGAAGCGUCUCCUUUGGGGUAAUCUGAACAGGUGCCGACCCAGAUGGCC
ACGUCUACCAGUCCAGCACCAAUCCCUUCACAGAGUCCUUCCACGGAGGAAGUACGAU
GAAUAUUAAUAGUUGAAUUUAACUCAGGGCUUCCUUGGUCCAGAUAGAUGAUAGCUUC
AAUGGGAAGAGGUCCUGAACAUUCAGCUCCAUUAAAGGUAAAAUACCAGCGUUGACAG
CAAGCAUUCCUGCAUUUGAGCCGAAGCGAGCCACUGAACAGAACUCGAAGAGCGCUGU
UGGAUCGCAUCUUUGUGAAUGUACAUUCCGCAAUUUUCCCAAGAUCUAUGCCAUAAUU
AAGUGAACUCCAUGAACACUGCUUGUAGUUUGGGGUCCAGGAUUCCUCAAAGCUU

Figure 19